

# **DRAFT Riverbreaks Conservation Area**

**Ten Year Area Management Plan  
FY 2015-2024**



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## OVERVIEW

- **Official Area Name:** Riverbreaks Conservation Area, # 8114
- **Year of Initial Acquisition:** 1981
- **Acreage:** 2,307 acres
- **County:** Holt
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**

### A. Strategic Direction

The Riverbreaks Conservation Area (CA) is managed to benefit populations of game and non-game species; enhance native vegetation in grassland, woodland and forest ecosystems; and provide quality recreational opportunities for the public, including target shooting, sport fishing and hunting of deer, turkey and other small game.

### B. Desired Future Condition

Maintain a healthy and sustainable woodland and forest ecosystem while incorporating cropland management and public recreational opportunities in the area.

### C. Federal Aid Statement

NA

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

A. **Priority Areas:** None

B. **Natural Areas:** None

### II. Important Natural Features and Resources

A. **Species of Conservation Concern:** Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

B. **Caves:** None

C. **Springs:** None

D. **Other:** According to the *Atlas of Missouri Ecoregions* (Nigh & Schroeder, 2002), Riverbreaks CA occurs in the Loess Hills subsection, Missouri River Loess Woodland/Forest Breaks Landtype Association. This landtype consists of a thick loess mantle and soils with rugged, deep loess hills bordering the Missouri River floodplain. Local relief is generally around 200 feet. Narrow ridges, steep slopes and numerous short, steep drainages are common. Bedrock and glacial till can be found in the deeper valleys. Vegetation includes prairie with timber (oak and mixed-hardwood woodland and forest) in the valleys and steeper slopes. Today

only the roughest lands are still timbered with second growth while the remainder is grass pasture, crops and urbanization (Nigh & Schroeder, 2002).

### III. Existing Infrastructure

- 7 parking lots, 1 American with Disabilities Act (ADA) accessible pad
- 6 designated primitive camping areas
- 1 unstaffed single projectile shooting range (ADA accessible)
- 1 vault pit toilet (ADA accessible)
- 1 primitive multi-use (hiking/biking/horseback riding) trail system (4 miles)
- 1 primitive service road/hiking trail (4 miles)
- 8.5 miles of interior service roads suitable for hiking
- 0.5 miles of maintained gravel public access roads
- 10 fishless watering holes
- 3 fishable ponds

### IV. Area Restrictions or Limitations

- A. **Deed Restrictions or Ownership Considerations:** On 500 acres, the sellers retained half oil, gas and mineral rights (Figure 3).
- B. **Federal Interest:** Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. **Easements:** Public road rights of way and utility easement with Public Water District #1
- D. **Cultural Resources Findings:** Cultural resources have been found on the area. Records are kept with the Missouri Department of Conservation (the Department) Environmental Compliance Specialist in Central Office located in Jefferson City. Managers should follow *Best Management Practices for Cultural Resources* found in the Department Resource Policy Manual.
- E. **Hazards and Hazardous Materials:** None observed.
- F. **Endangered Species:** None observed.
- G. **Boundary Issues:** None

## MANAGEMENT CONSIDERATIONS

### V. Terrestrial Resource Management Considerations

The forest community consists of mesic and dry loess/glacial till forest. This natural community contains mesophytic or mixed hardwood forest with multiple vertical layers. The soils are deep, well-drained, have naturally high fertility and are strongly acidic to

neutral (pH of 5.1-7.3). The canopy is typically composed of a few dominant tree species with several trees species co-dominant or in an intermediate position. Canopy dominants range from 60 to 130 feet tall or taller with overlapping and spreading crowns and a nearly complete (>80%) canopy closure. Dominant species include white oak, shagbark hickory, northern red and black oak, basswood, ash, black walnut, Kentucky coffee tree and sugar maple. The understory contains Ohio buckeye, pawpaw and eastern hop hornbeam. A subcanopy of short structure trees (15-30 feet) is present. The understory is composed of shade-tolerant shrubs, small trees and canopy saplings (5-10 feet tall) and woody vines. The ground layer consists of shrubs, many vernal herbs, ferns and a patchy scattering of mosses and fungi. Decaying logs and leaf litter is often covered in mosses, liverworts and fungi. The number of woody and vernal herbaceous species is high. Woody vines, shrubs, trees, ferns and perennial forbs are important groups.

The mesic loess/glacial till forest occurs on lower back slopes, foot slopes, toe slopes and in ravines in breaks and hills associated with landscapes that are highly dissected by streams. They are gently sloping to steep (5-35% slope or more), typically with north and east aspects. (Nelson, 1985).

**Challenges and Opportunities:**

- 1) Enhance the forest and woodland communities on the area.
- 2) Enhance deer and turkey habitat on the area.
- 3) Enhance the diverse mixture of quality native vegetation.

**Management Objective 1:** Manage for healthy and sustainable mixture of woodland and forest communities on the area.

**Strategy 1:** Conduct forest inventory by compartment with an estimated reentry time of 15 years or as needed.

**Strategy 2:** Utilize Best Management Practices, including adequate riparian buffers, to reduce soil erosion and increase water quality.

**Strategy 3:** Monitor woodlands and forests for invasive exotic vegetation, diseases and insects. Treat undesirable vegetation and pests to control spread.

**Strategy 4:** Implement silvicultural practices as prescribed by the detailed forest inventory process (Figure 2).

**Management Objective 2:** Enhance deer and turkey habitat and habitat for non-game species on the area.

**Strategy 1:** Provide diverse habitat using agricultural, mechanical and chemical treatments; prescribed fire; and native food types, including hard and soft tree and shrub mast.

**Management Objective 3:** Enhance the diverse mixture of quality native vegetation.

**Strategy 1:** Implement agricultural disturbances (including prescribed fire) to establish and maintain quality vegetation.

**Strategy 2:** Monitor and annually treat exotic and noxious vegetation and pests with herbicides, mechanical methods and prescribed fire.

## **VI. Aquatic Resource Management Considerations**

### **Challenges and Opportunities:**

- 1) Provide sport fish populations on area fisheries.
- 2) Prevent the infestation and spread of nuisance aquatic species.
- 3) Manage the riparian corridor.

**Management Objective 1:** Provide sport fish populations on area fisheries.

**Strategy 1:** Periodically survey fish to monitor sport populations, e.g., measure largemouth bass and bluegill proportional stock density.

**Strategy 2:** Supplementally stock fish (e.g., channel catfish), when needed to maintain angling opportunities.

**Management Objective 2:** Prevent the infestation and spread of nuisance aquatic species.

**Strategy 1:** Plant native vegetation (e.g., water willow, water lily) if needed.

**Strategy 2:** Apply herbicide treatments on aquatic nuisance species, if needed.

**Management Objective 3:** Manage the riparian corridor.

**Strategy 1:** Plant native trees and native vegetation, as needed.

## **VII. Public Use Management Considerations**

### **Challenges and Opportunities:**

- 1) Provide infrastructure and regulations for the public to access terrestrial resources including hunting, target shooting, multi-use trails (hiking/biking/horseback riding) and viewing opportunities.
- 2) Provide area users with compatible and inviting multiple use opportunities for recreation, education and information.

**Management Objective 1:** Maintain infrastructure and regulations to facilitate the public's access to resources and recreational opportunities.

**Strategy 1:** Monitor and evaluate infrastructure and regulations annually.

**Strategy 2:** Maintain access to area.

**Management Objective 2:** Provide area users with compatible and inviting multiple use opportunities for recreation, education and information.

**Strategy 1:** Maintain accurate area information and regulations through the Missouri Conservation Atlas, area brochures, posted information and staff contacts with area users.

**Strategy 2:** Promote compatible uses for hunting, fishing, birding, hiking, camping and nature photography.

## **VIII. Administrative Considerations**

### **Challenges and Opportunities:**

- 1) Maintain area infrastructure at current levels.
- 2) Acquisition of land, when available.

**Management Objective 1:** Maintain area infrastructure at current levels.

**Strategy 1:** Maintain area infrastructure in accordance with Department guidelines and at the currently identified maintenance level (1 and 2).

### **Lands Proposed for Acquisition:**

When available, adjacent land may be considered for acquisition from willing sellers.

Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

## **MANAGEMENT TIMETABLE**

All strategies for this management plan are considered ongoing.

## APPENDICES

### Area Background:

Riverbreaks Conservation Area is located approximately 25 miles north of St. Joseph, in Holt County. The Department began acquiring the area in 1981. It currently contains 2,307 acres. The area was originally purchased to protect a large remnant tract of forest land in the northwest part of the state.

The Conservation Area is located within the Loess Bluffs, adjacent to the Missouri River floodplain. Loess soil is a unique natural feature that was formed as glaciers melted, leaving behind very fine wind-blown deposits. The soil is prone to erosion, especially if the original columnar structure is disturbed. Local relief can be as much as 200 feet of loess soil on top of a base limestone shelf.

Approximately 63 percent of the conservation area is currently covered in trees (mixed oak-hickory). The remaining acres consist of old fields, wildlife food plots, warm-season grass plantings, wildlife watering holes, ponds and small remnant loess hill prairies, mostly located on ridge tops and south-facing slopes.

Prior to Department purchase and European settlement, Native Americans inhabited the area. Since then, the area was settled mostly by farmers and ranchers, who divided the area into small to medium sized ownerships, dotted with homes and crossed with fences.

The area is open to the public from 4 a.m. to 10 p.m. daily (except as otherwise authorized or restricted). Special facilities include a single projectile target shooting range; hiking trails and a multiuse (hiking/biking/horseback riding) trail system that leads through lush forests, open fields and overlooks of the Missouri River floodplain.

### Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Forests/Woodlands	1,452		63
Old Fields	792		34
Native Grasses	50		2
Miscellaneous	10		<1
Water	3		<1
<b>Total</b>	<b>2,307</b>		<b>100</b>
Stream Frontage		11,600	

**References:**

Nelson, P. W. (1985). *The terrestrial natural communities of Missouri*. Jefferson City, Missouri: Missouri Natural Areas Committee.

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, Missouri: Missouri Department of Conservation.

**Maps:**

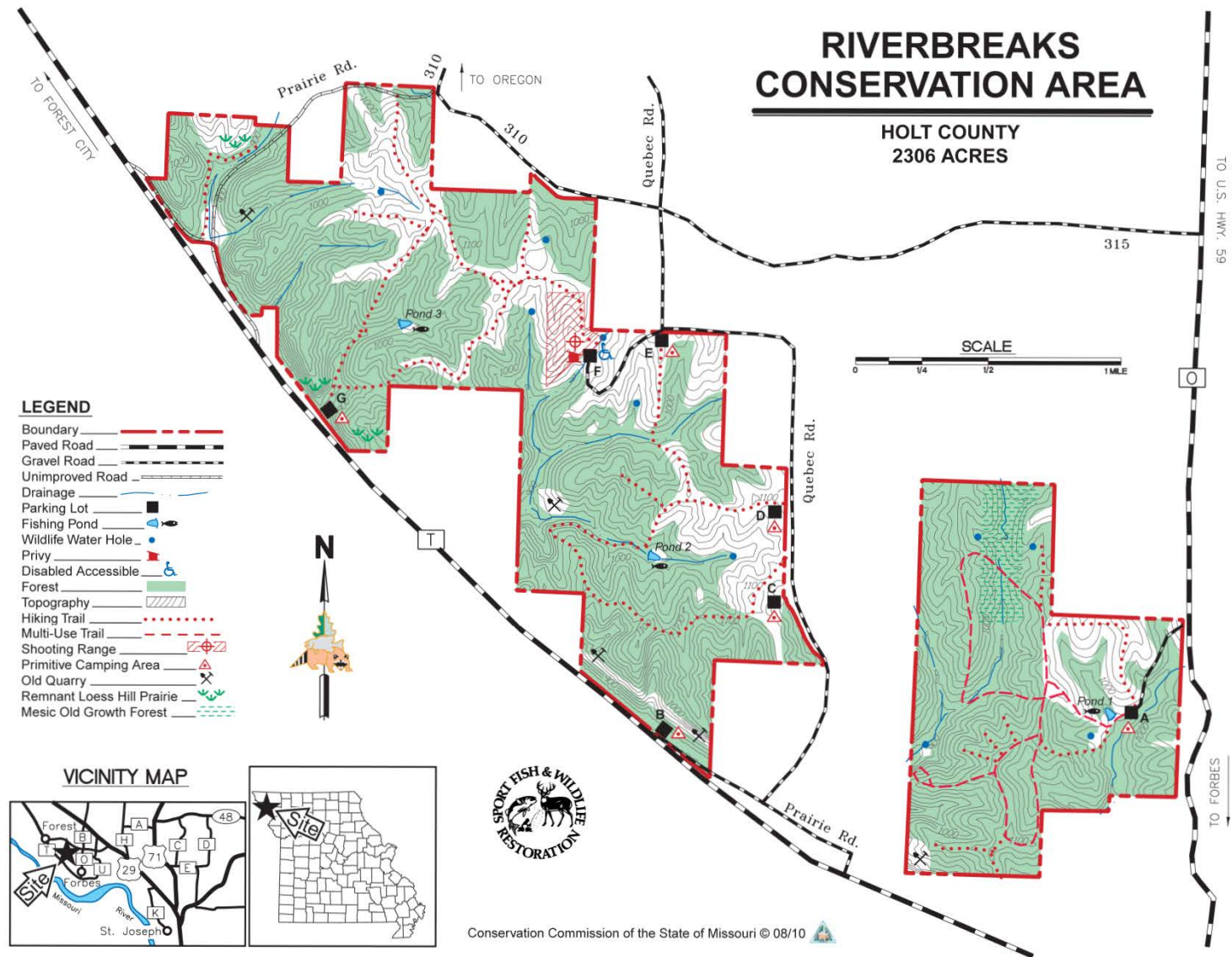
Figure 1: Area Map

Figure 2: Aerial Map

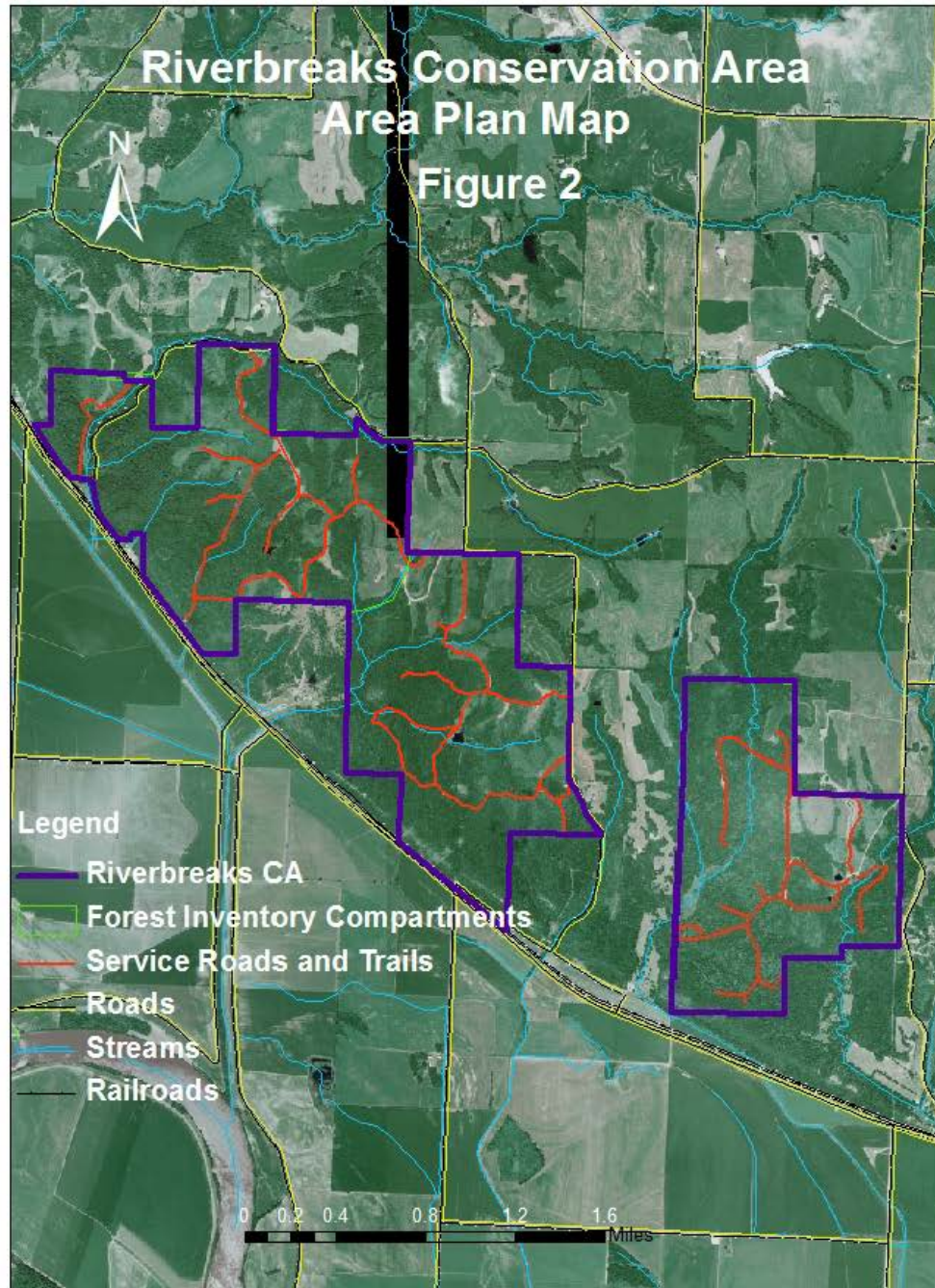
Figure 3: Mineral Rights Map



**Figure 1: Area Map**

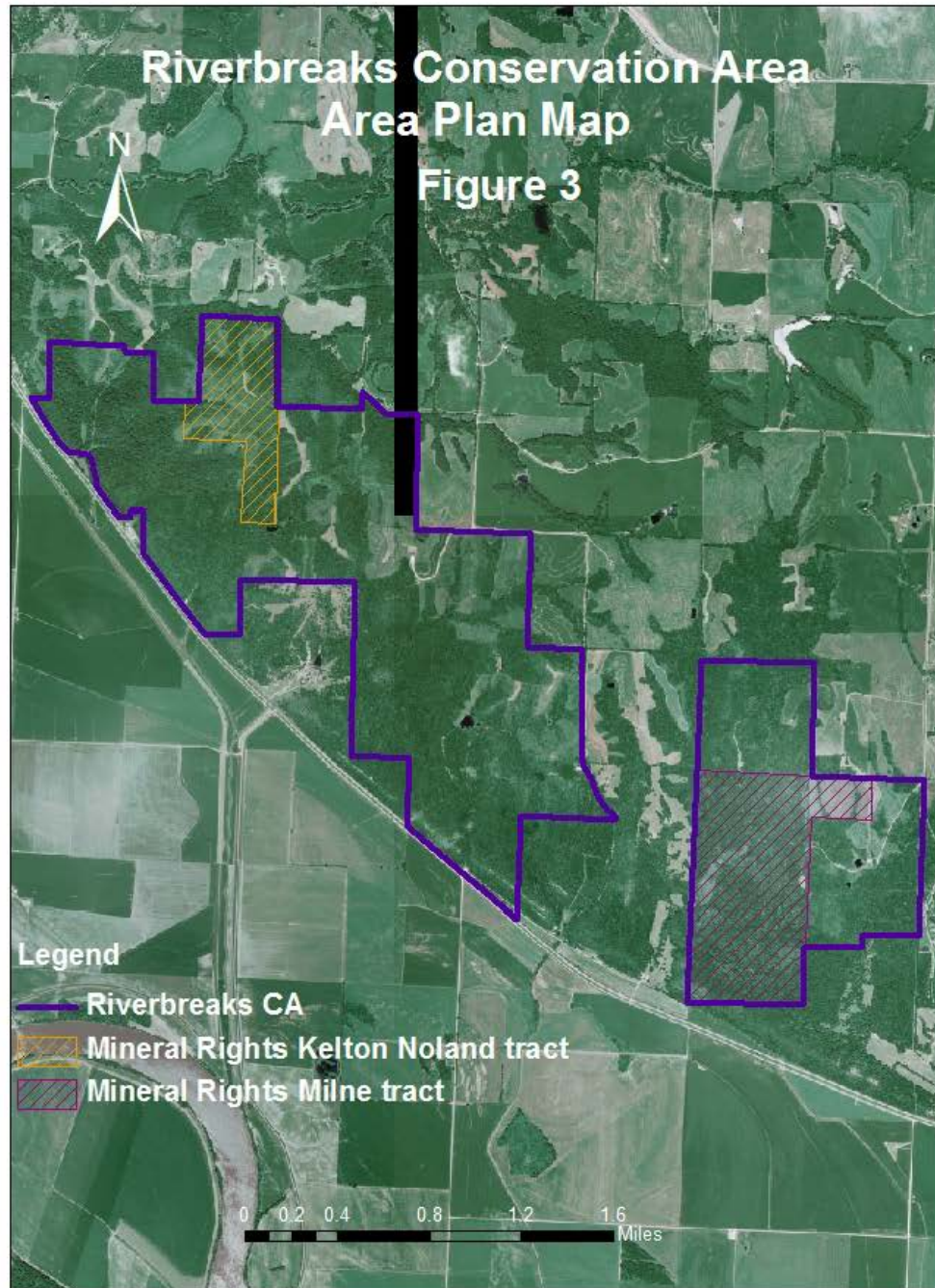


**Figure 2: Aerial Map**





**Figure 3: Mineral Rights Map**



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